UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,323	06/06/2001	Kanishka Lahiri	A7912	6175

7590 06/21/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, NW
Washington, DC 20037-3213

EXAMINER	
RAY, GOPAL C	

ART UNIT	PAPER NUMBER
2111	7

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/874,323	LAHIRI ET AL.	
	Examiner	Art Unit	
	Gopal C. Ray	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,10 and 18* is/are rejected.

7)☒ Claim(s) *6-9,11-17,19 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 12/3/01 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1-20 are presented for examination.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner believes that the title of the invention is broad. A descriptive title indicative of the invention will help in proper indexing, classifying, searching, etc. See MPEP 606.01. However, the title of the invention should be limited to 500 characters. Applicant is reminded of the proper language and format for an abstract of the disclosure.

3. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because of the word "said" in lines 3 and 7. Applicant should delete the word in each occurrence and make appropriate changes.

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. Claims 1 and 7 are objected to because the word --and-- should be inserted after "," in claim 1, line 11 and --.-- should be inserted after the word "bandwidth" in claim 7,

line 2. Furthermore, all claims should be revised carefully to eliminate all grammatical errors and antecedent basis problems.

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 4, 5 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 4,672,536 issued to Giroir et al. in view of common knowledge in the art.

As per claim 1, the reference of Giroir et al. teaches "a plurality of components sharing at least one shared resource" in col. 2, lines 54-58; "a lottery manager, the lottery manager being adapted to receive request for ownership for said at least one shared resource from a subset of the plurality of components" in Fig.2, elements A-0 to A-N-1; "the lottery manager being adapted probabilistically choose one component from the subset of the plurality of components for assigning said at least one shared resource" in col. 2, line 60- col. 3, line 2.

The reference of Giroir et al. fails to expressly teach that "each of the subset of the plurality of components being assigned lottery tickets" and "the probabilistically choose being weighted based on a number of lottery tickets being assigned to each of the subset of the plurality of components". However, the reference of Giroir et al. teaches functionally equivalent features. It assigns "age of the request" to each of the subset of the plurality of components and the request is weighted based on the "age of the request" and the priority of the unit. See col. 2, line 66 – col. 3, line 2 of Giroir et al.

Absent a showing of new or unobvious results, it would have been obvious choice of design to one of ordinary skill in the art at the time the invention was made to substitute the number represented by the "age of the request" for the number of lottery tickets issued or numbers assigned by anything else to set up an arbitration technique already known in the art because these are functionally equivalent features that can be used to satisfy conditions of the known arbitration technique and are within the skill of an ordinary person in the art at the time of the invention.

As per claim 4, the reference of Giroir et al. teaches "wherein the shared resource is a bus" in col. 1, lines 14-16.

As per claim 5, the reference of Giroir et al. teaches "wherein the shared resource is a communication channel" in col. 4, lines 15-18.

As per claim 18, the claim recites a method which parallels limitations of claim 1. In teaching the construction and use of the device, the combination of US Patent 4,672,536 issued to Giroir et al. and common knowledge in the art teaches a corresponding method.

8. Claims 2, 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,672,536 issued to Giroir et al. in view of common knowledge in the art as applied to claim 1 above, and further in view of US Patent 5,862,356 issued to Normoyle et al.

The reference of Giroir et al.fails to expressly teach "the circuit is a system on chip" (claim 2), wherein the subset of the plurality of components are system on chip masters that can drive a communication transaction" (claim 3) and "wherein operations of the lottery manager are pipelined with actual data transfer to minimize idle bus cycles" (claim 10). However, the above features were well known to one of ordinary skill in the art at the time the invention was made as evidenced by Normoyle et al. The

reference of Normoyle et al. teachs the features in the abstract of the disclosure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the above features in the system of Giroir et al. because "system components on a chip and communicating transaction" would benefit the system of Giroir et al. in many ways including reduction of size due to less hardware and pipelining would minimize bus idling.

9. Claims 6-9, 11-17, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Furthermore, amend claims 1 and 7 to overcome the objection set forth in paragraph 5 of this Office action. The claims are allowable because they recite additional limitations such as "wherein an assignment of lottery tickets is based on assigning priorities among the subset of the plurality of components, with a component having a highest priority receiving a maximum number of lottery tickets." (claim 6), etc. in combination with the rest of the claimed features which the prior art on record does not teach or fairly suggest.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is urged to consider the references. However, the references should be evaluated by what they suggest to one versed in the art, rather than by their specific disclosure. Furthermore, applicant is reminded of the duty to disclose as set forth in 37 CFR § 1.56.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gopal C. Ray whose telephone number is (703) 305-9647. The examiner can normally be reached on Monday - Friday from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on (703) 305-4815. The new fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**mark.rinehart@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2100 receptionist whose telephone number is (703) 305-3900.

Gopal C. Ray

GOPAL C. RAY
PRIMARY EXAMINER
GROUP 2100